

REMARKS

Claims 1-39 were previously presented. In the present amendment, Claims 40-47 have been added; and no claims have been canceled. Thus, after entry of the present amendment, Claims 1-47 are pending.

Applicants thank the Examiner for confirming that this application has been granted priority to September 18, 2000.

DRAWINGS

The Examiner has objected to Figures 1-2 and 7A-7C, noting that those Figures (as previously filed) do not show interconnection directional arrows that would indicate the direction of communication between individual elements in the figures (unlike Figs. 4a and 4b that do have the “appropriate” notation).

As shown in the Substitute Drawings filed contemporaneously with this response (2 sheets), Applicants have amended Figures 1-2 to show interconnection directional arrows that indicated the direction of communication between individual elements in the figures.

However, Figures 7A-7C are intended as organizational charts showing general arrangement or relationship between various elements and work pieces associated with each element. As such, communication, data, signal or other similar type flow between individual elements in Figures 7A-7C would appear to be unnecessary to denote the information intended to be conveyed in the figures. If the Examiner continues the objection, Applicants will reconsider their position on this issue, and would likely provide substitute drawings having the requested directional arrows.

Accordingly, Applicants respectfully submit that the Examiner's objections to the drawings have been overcome, and respectfully request notice of same.

CLAIM OBJECTIONS

PARAGRAPHS 3-7 OF OFFICE ACTION

Claims 1-18 were objected to because of their alleged interchangeable use of "electronic data acquisition system" and "electronic data acquisition device." Where appropriate in Claims 1-18, in order to provide consistency in claim terminology, Applicants have changed the phrase "electronic data acquisition system" to "electronic data acquisition device". In that regard, Applicants intend (and submit that persons of ordinary skill in the art will understand) that the concepts of "device" and "system" within the claims are intended in their broadest allowable meanings without reading on any prior art. Among other things, Applicants intend the term "device" to include "system" where permissible in view of prior art and the context of the particular claim.

The Examiner has noted additional objections to the form of the claims, in paragraphs 4-7 of the Office Action. Applicants have further amended Claims 3, 11, 18, and 22 as indicated herein, and respectfully submit that the Examiner's formal objections to those claims have been overcome.

PARAGRAPH 8 OF OFFICE ACTION

In paragraph 8 of the Office Action, the Examiner indicates that Claims 1-21 and 34-38 should be written as "A system comprising: . . .", asserting that it is impossible for one all-inclusive apparatus to house all of the intended parts of at least pending Claims 1 and 19.

Applicants respectfully request that the Examiner consider the following remarks in that regard, and reconsider and withdraw the objection. As defined in Webster's New World Dictionary of the American Language, 2nd ed., 1976, at page 65, the plural of apparatus may be either apparatus or apparatuses. In this regard, apparatus is defined as "1. the instrument, materials, tools, etc. needed for a specific use, experiment, or the like . . . 4. the means or system by which something is kept in action or a desired result is obtained". Clearly, the term apparatus properly refers to an integrated group of materials or devices used for a particular purpose, and even includes the concept of a "system" (see definition 4 in the preceding quotation), which appears to be the concept suggested by the Examiner. Accordingly, Applicants respectfully submit that the term "apparatus" as used in Claims 1-21 and 34-38 is appropriate, and that no amendment is required in that regard.

CLAIM REJECTIONS 35 U.S.C. §112

PARAGRAPH 10 OF THE OFFICE ACTION

Claim 11/10 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended Claim 11/10 as indicated herein, and respectfully submits that the Section 112 objection has been overcome.

SUBSTANTIVE CLAIM REJECTIONS

Applicants submit that no new matter has been added by the formal amendments set forth above, and that those amendments in no way limit the intended claim scope from the scope as originally presented.

Before specifically addressing each of the Examiner's substantive claim rejections, Applicants note that those rejections are *all* based on Smith (U.S. Patent No. 6,192,282). Accordingly, Applicants set forth here some general comments regarding the limitations of Smith's disclosures, as well as differences between Smith's technology and the inventions claimed by Applicants.

Smith is directed to technology to automate and control a *plurality* of building systems (these include security, environment/energy, lighting, low-voltage devices, water management, entertainment, and communication, according to Smith's Fig. 1, and col. 7, l. 61-67). Smith notes that prior art efforts to provide such "centralized automation" have typically required expensive custom programming for each particular building (col. 2, l. 14-19). To address that complicated task, Smith's approach is "modular in the extreme" (col. 2, l. 60), and is designed around (and requires) the use of a significant number of components, language, architecture, and other elements. Smith's modular design "allows for uniform and coordinated control over a plurality of automation subsystems..." Smith provides a "generic" control protocol that may be used to control systems that would otherwise be incompatible with one another (col. 4, l. 18-26). Each of the subsystems receives control instructions in a first control protocol as an input, and produces as an output control instructions in a second control protocol (col. 3, l. 47-50). Indeed, Smith would not appear to have utility except in situations having *multiple* systems for which centralized control is sought.

Due to the complexity of the task Smith seeks to accomplish (centralizing control of many incompatible systems), Smith itself is relatively complicated compared to Applicants' inventions. Perhaps most relevant in that regard is that Smith requires an Intelligent Home

Controller 13 to execute all functions of Smith's widely varied Subsystems. That controller 13 is central to Smith's technology, and indeed, it appears that Smith's system could not be practiced without it. Among other things, Smith's controller 13:

- 1 maintains in memory a plurality of computer programs, which can be used to control a variety of building systems (including those listed above - security, environment/energy, lighting, low-voltage devices, water management, entertainment, and communication). (col. 7, l. 61-67).
- 2 Communicates through serial data with lighting/appliance control 41, to vary the amount of electricity provided to devices such as outlets 55, lighting 57, drapes 59, and general load switching device 61 (col. 8, l. 19-24).
- 3 Controls and/or communicates via either infrared or serial signals with audio/video control 43 and audio controller 63, providing control over a CD player, tuner, tape player, and home theater (col. 8, l. 25-32).
- 4 Manages the operation of video distribution system 45, including laser disk, camera, satellite antenna, satellite receivers, modulators, amplifiers, splitters, and televisions (col. 8, l. 33-36).
- 5 Controls the operation of communication system 47, such as a PBX telephone system and associated end devices 95. Among other things, controller 13 may use this system to send/broadcast messages in a synthetic human voice (col. 8, l. 37-52).

- 6 Controls through serial data line 127 an environmental system 149, including one or more HVAC (heating/ventilating/air conditioning) units, zone dampers, and associated relay packs, and thermostatic systems (col. 8, l. 62-67).
- 7 Controls through serial data line 143 a security system 149, including smoke/heat sensors, electronic gate, electronic lock, contact sensors, and a card pass system (col. 9, l. 3-7).
- 8 Controls a variety of low-voltage devices 53 through analog, digital, and relay lines, including garage doors, lawn sprinklers, exterior lights, and pool/spa heaters 187.
- 9 Uses a relatively complex and varied “interface system 15” to allow a human operator to interact with it. Such interfaces are described as including infrared controllers²⁹, radio frequency controllers 31, display keypads 33, touch screens 35, security panels 37, and keypads 39. (col. 8, l. 14-18). Notably in connection with Applicants’ next point (regarding a lack of enabling disclosure by Smith), Smith does *not* appear to even mention using a web browser as part of Smith’s “interface system 15”.

In addition to (and independently of) the complexity of Smith’s approach (requiring a local controller 13), Smith does not appear to disclose many of its own features (such as software features 201 and Subsystem Gateways 235, at col. 10, l. 38-45) in sufficient detail to even enable persons of ordinary skill in the art to practice Smith’s *own* technology, let alone to “disclose” or “make obvious” Applicants’ inventions. In other words, Smith’s required “adaptation” (to allow

Smith's required communication between Smith's controller 13 and middleware/software modules 207 and subsystem gateways 235) apparently is critical to the Smith invention, yet the communication protocol between at least a pool/spa software module and the controller 13 is not described or taught in sufficient detail to enable a person of ordinary skill in the art to practice the Smith invention.

Further in that regard, Figure 5 of the Smith patent illustrates various subsystems and apparently simply "assumes" there is a software protocol that could effectively unify communication between any combinations of such subsystems. This is simply not true. In the case of many devices (including Pool and Spa control systems), there simply is not sufficient on-board capability (e.g., microprocessor capacity in the pool and spa control system itself; many such microprocessors have limited program memory, storage area, and speed). This apparently is evidenced (among other things, and relevant to Applicants' technology and claims) by pool and spa controllers being conspicuously absent from that Figure 5 and by (among other things) the publications submitted herewith, as discussed below.

Finally, although Smith "mentions" certain concepts that appear to relate to Applicants' inventions (and even if those mere "mentions" by Smith were enough to disclose or make obvious those concepts broadly, which Applicants' do not concede), Applicants' inventions differ from such "disclosures" by Smith sufficiently to be patentable. Among such "mentioned" concepts are use of the Internet (World Wide Web) in connection with remote monitoring and control and the ability to sense/monitor/control parameters of a pool/spa installation.

For example, Smith "discloses" (or at least mentions) using the Internet or World Wide Web or modem communications for certain purposes. In that regard, Smith states that its

software 201 may be accessed from a remote location using a modem, the worldwide web, a LAN, or a WAN (col. 9, l. 55-59). Smith states that this remote access enables “off-site integration, diagnostics, and modification” (col. 10, l. 21-22).

Perhaps most telling as to the limitations of Smith in relation to Applicants’ preferred use of a network such as the Internet, Smith’s only other mention of the Internet/World Wide Web appears to be in connection with “External Interface Gateways” (col. 19, l. 62 through col. 20, l. 54). In that nearly complete column of “disclosure”, Smith only “mentions” the Internet in the very last paragraph (col. 20, l. 45-54), and even then speaks in very conjectural terms. Specifically, Smith notes that TCP/IP protocols were selected for LAN communication (not for the Internet), but that the Internet could “possibly” provide GUI applications on a World Wide Web server, and “GUI applications may be developed for control, configuration, diagnostics, data collection and analysis.”

In a further example of Smith’s lack of sufficient disclosure to support the Examiner’s current rejections, Smith states that those External Interface Gateways could be used to “allow the homeowner to remotely control the home and determine status from his/her car phone or office PC.” Col. 20, l. 2-7. Beyond that broad “concept”, Smith does not address or disclose any way to actually practice that concept, certainly not in sufficient detail to support a rejection of Applicants’ claims.

Even if those “mentions” of “possible” Internet access were sufficient (which Applicants dispute), Smith’s “remote access” (via the Internet or otherwise) appears to be simply allowing access to Smith’s complicated controller 13. This differs significantly from Applicants’ concepts and claimed inventions. On a related point, and as mentioned above, although Smith may

“envision” the inclusion of pool/spa equipment in the context of a local or remote controlled environment, Smith simply does not sufficiently teach implementation of such a scheme to be said to have “disclosed” same.

Among other things, Applicants’ inventions require a “remote data collection and storage server” (see Claim 1, for example) that is not disclosed or made obvious by Smith or by any prior art or permissible combination of prior art of which Applicants are aware. In that regard, and regarding remote web-based environments generally, the “Embedded Internet Technology” necessary for such remote monitoring and control of building subsystems had not yet evolved to the point of commercial implementation at the time of the Smith application was filed. In other words, at the time the Smith application was filed, no commercially available (or viable) systems existed that were capable of communication serially, or otherwise so as to extend control and/or monitoring of *spa/pool* via a web-based or Internet association.

Further in this regard, embedding Internet technology refers to the idea that almost any device can be imbedded with chips to connect the device to an infinite network of other devices. The goal of this type of computing, which combines current network technologies with Internet capability, is to create an environment where the connectivity of devices is embedded in such a way that the connectivity is unobtrusive and always available. However, in order for a device such as a pool/spa (or a water installation such as discussed in the present application) to be capable of being controlled via the Internet, it must have at least the following features: (1) an operating system OS, (2) a central processing unit CPU, (3) a network interface, and (4) a suitable network protocol, none of which are adequately disclosed in the Smith patent.

In 1996, when the Smith provisional applications were filed, “embedded internet technology” was not sufficiently known by a “person of ordinary skill in the art” as to justify the Examiner’s rejection based on Smith’s aforementioned cursory review of the technology (Smith col. 20, l. 5-55). In this regard, the Smith patent does not sufficiently disclose/enable the concepts of Applicants’ invention, and the state of the art at the time of the Smith filing was not sufficient to make up for Smith’s shortcomings in that regard. Thus, it appears that the Smith disclosure is inadequate as a *written description* of the invention and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to *enable* any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and the *best mode* contemplated by the inventor for carrying out his invention. (35 U.S.C. §112, first paragraph).

As further evidenced by at least the enclosures submitted contemporaneously herewith, embedded Internet technology had not evolved sufficiently to make such web-based monitoring and control well know to those skilled in the art until after the issuance of Smith. For example, as indicated in the enclosed paper entitled “Commercial and Industrial Applications of a micro WebServer”, presented at the 1st Annual Embedded Internet Conference held in San Jose, CA, (four years after the Smith application was filed), Applicants discussed some of the many considerations and difficulties encountered in attempting to web-enable a pool/spa for remote monitoring and control as late as September 2000.

Such considerations and difficulties associated with the web-enablement of a pool/spa include, among other things, choosing a proper and compatible system platform and associated program language. As set forth in Applicants’ specification, Applicants preferred solution was to

use a TINI Network Interface programmed in Java, and to do so, Applicants had to find a way to run Java as an acceptable real-time programming language with minimum processor interruptions. In this regard, Applicants use Java for the data collection and control inputs and off-loads the hard-time to a PIC chip. This technique is described in an article entitled "Java Splashes in Real-Time Embedded Systems!" by Philip J. Gill, which was published in JavaReport Magazine in October 2000 (and was thus newsworthy many years after Smith's 1996 application).

In addition, technology such as the aforementioned TINI Network Interface (part number DSTINI1-1MG, as disclosed in Applicants' specification) was not commercially available until at least 1998, two years after Smith's provisional applications were filed! In this regard, Applicants respectfully submits that the web-enabled technology needed to enable the Smith invention, as least with respect to control and monitor of a pool/spa, was not available at the time the Smith application was filed.

Accordingly, Applicants respectfully submit that it appears that a few isolated (and broad and insufficiently supported and disclosed) statements in the Smith patent may have misled the Examiner to presume that, at the time of Smith's application, there existed sufficient technology for web-enabled control and monitoring capabilities for a pool/spa. Instead, and as the Examiner is well aware, in order to avoid the impermissible use of hindsight in making a rejection, the Examiner must take into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and not include knowledge gleaned only from Applicants' disclosure. *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). (MPEP 707.07(f), at page 700-115) "It is difficult but necessary that the decisionmaker

forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). (*also*, MPEP 2141.01(a), Section III, at page 2100-117) In this regard, due to today's almost matter-of-fact knowledge regarding Internet capabilities, it would be appear easy to project into Smith's 1996 application text today's common Internet knowledge. This sentiment is recognized in the MPEP and stated as, "The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process." (MPEP 2142, at page 2100-123)

Furthermore, without any detailed description other than the statement, "The external interface gateway 361 provides remote access to the controller 13 through industry standard, commercially used protocols." (col. 19, l.66-67; and col. 20, l. 1-2), Figure 8 of the Smith patent does not further help teach or enable a person skilled in the art to make or use the Smith invention in a web-based environment.

As set forth above, language of the Smith patent further supports the idea that web-based remote monitoring and control of a pool/spa was not capable at the time the Smith application was filed. For example, apparently as an after thought, Smith mentions that, "The TCP/IP protocols were selected to enable configurations and control via local area network (LAN), **but** the concept has since expanded to include Internet access." (col. 20. l. 45-47 emphasis added) It appears that Smith arbitrarily extended the concept of the Home Automation System to include the Internet without any existing technological basis for the statement. The lack of existing web-

enabled control and monitoring at the time of the Smith filing is further emphasized as Smith indicates that, “The installers and service providers have password-protected access within the home, possibly providing graphical user interface (GUI) applications on a (World Wide Web) server.” (col. 20, l. 49-53 emphasis added) and “GUI applications may be developed for control, configuration, diagnostics, data collection and analysis.” (col. 20, l. 53-55 emphasis added) Smith’s own uncertainty regarding the implementation or workability of web-enabled technology is clearly evident in the above statements by the use of such terminology as possibly providing and may be developed without further elaboration as to how the aforementioned elements are either implemented or enabled.

Thus, in the context of web-enabled remote monitoring and control of a pool/spa via the Internet, Applicants respectfully disagree with the Examiner’s contention that Smith “teaches” the use of the Internet (col. 20, l. 45-55) (par. 15 of the Office Action), at least with respect to Applicants’ inventions. Among other things, Smith does not teach or make obvious a remote (e.g., web-based) server being used as a storage and control device and providing control commands through a GUI (par. 14 and 22 of the Office Action), the use of the Internet to *periodically* collect data about the pool or spa and a communication link provided on demand (par. 15 of the Office Action), a remote user interface (par. 17 of the Office Action), a dial up connection (par. 19 of the Office Action), wireless connection (par. 21 of the Office Action), and a server providing the use of an Internet browser. (par. 24 of the Office Action)

As indicated above, Applicants submit herewith various documentation relevant to what would have been known (or obvious) to a person of ordinary skill in the art at the time of Smith’s application. If the Examiner requires further information or explanation in that regard,

Applicants would respectfully request an opportunity to prepare/obtain and forward same for consideration by the Examiner. In any case, Applicants respectfully submit that the burden of proof (to support any continuing rejection the Examiner may impose in this regard) falls on the Examiner, and Applicants should be afforded a meaningful opportunity to respond to any such further information the Examiner may present. Applicants respectfully submit that, for such an opportunity to be meaningful, any such further Office Action should be non-final.

On a related point, and as another example of Smith's inadequacies as a basis for rejecting Applicants' claims, Smith's mention of pool/spa concepts is relatively limited and is very general, in the context of "a variety of low voltage devices 53...under the control of controller 13." Col. 9, l. 24-25. More specifically, Smith:

- lists in Fig. 1 the following sub-items of Water Management of a "pool/spa/steam": temperature, heaters, pumps, chemicals;
- merely "mentions" control of a pool/spa heater 187 (col. 9, l. 28) (Smith does not even mention control of the "pumps and chemicals" listed in Smith's Fig. 1); and
- shows a "pool/spa" icon 187 in Fig. 2c, mentions a "pool/spa module 253" at col. 10, l. 34.

Thus, even when Smith mentions anything to do with a pool or spa, it is limited only to heaters (col. 9, l. 28). Thus, in addition to all of the other shortcomings of Smith, it does not even contemplate sensing or controlling any aspect of a pool/spa other than its heater (for example, Smith does not mention any sensors required to monitor "chemicals" in a pool/spa, or any chemical dispensing mechanism that would be required to "control" such a chemical parameter of a water installation). Those chemical "sensors and controls" are among those in

pool and spa systems that are not designed to "interface" with other systems, such as Smith's. Even if that were not the case, Smith still does not disclose any imbedded Internet Gateway (such as disclosed and claimed in certain of Applicants' claims), with all of the various benefits Applicants' approach provides. Thus, in contrast to Smith, Applicants' invention provides a detailed disclosure of a wide variety of sensing and control over several aspects of a pool/spa.

On a related point, because Applicants' inventions are directed to a more limited scope of "system" to be controlled/monitored than is Smith (Applicants' focus is on water systems and installations, such as pools, spas, and baths), Applicants' inventions can operate with and require much simpler hardware and software.

In contrast to Smith, Applicants disclose in detail a system that utilizes the Internet to remotely monitor and control a variety of parameters of a pool/spa, sufficient to enable persons skilled in the art to practice without undue experimentation Applicants' invention. Among other things, Applicants have disclosed a data acquisition and control system 60 and network interface 70 preferably provided in an integrated circuit (IC) device 70A (FIG. 1). One of many such suitable devices available at the time of Applicants' invention is sold under the name "TINI Network Interface" (as mentioned above), and is commercially available through Dallas Semiconductor, Dallas Texas. As indicated above, Applicants assert that technology such as the TINI was not available until at least 1998. Details of the preferred device 70A and its related components are described in Applicants' FIGS. 3A-D. (and discussed at p. 10, l. 14-21 in Applicants' specification).

In addition, Applicants further disclosed model and part number of various other devices suitable for use in Applicants' inventions, such as: digital-to-analog converter devices 72A, 72B

which implement the analog sensor 72, addressable switch devices 74A-74H which implement the digital sensor 74, device U14 for implementing the modem function, as well as detailed figures such as FIG. 5B that depict the preferred operation of exemplary functions preformed by the data acquisition and control system 60. In other words, unlike the Smith patent, Applicants have invented and disclosed a detailed blueprint of how to make and use Applicants' inventions, to control and monitor a pool/spa utilizing embedded Internet technology.

Indeed, there are numerous issues that would prevent (or at the very least make difficult or unsatisfactory) any effort to modify Smith to provide at least certain of the benefits of Applicants' claimed inventions. For example, Applicants' do not utilize any element equivalent to Smith's "controller 13". Instead, Applicants' preferred TINI device (or its equivalent) collects data and preferably uses an Ethernet connection via a router to connect directly to the Internet and transmit the data to a web server, where the data is stored; this approach makes the data accessible from any web browser. To provide Applicants' type of data availability, Smith's controller 13 would have to be on all the time, be logged into an Internet Service Provider via Point-to-Point Protocol (PPP), maintain a secure connection to the Internet via a router or other firewall, and would have to be rebooted after a power failure. Applicants' inventions avoid these issues, and provide a much simpler and more affordable, focused solution. On a related point, Applicants' claims directed to "periodic" collection of data from an on-demand connection would only be feasible if Smith were able to meet/address all of the foregoing Internet "accessibility" requirements.

Among other things, and as discussed above, Applicants' inventions are much less complex than Smith's, are capable of operating autonomously (rather than the rebooting or other

problems that would occur with Smith's approach), and are specifically directed to the operation of water installations such as pool or spa equipment.

CLAIM REJECTIONS - 35 U.S.C. §102

PARAGRAPHS 11-24 OF THE OFFICE ACTION

The Examiner has rejected Claims 1-4, 7-9, 12, 16, 19-20, 22-28, 30-32 and 34-39 under 35 U.S.C. 102(e) as allegedly being anticipated by Smith (U.S. Patent No. 6,192,282). As explained below, Applicants respectfully traverse those rejections.

Of the above-referenced rejected claims, Claims 1, 19, 22, 30, 34 and 39 are independent. Accordingly, once patentability of those claims is established, all claims depending from them (which includes all the other pending claims, except new Claims 40-44) are likewise allowable. Notwithstanding that fact, Applicants address below all of the Examiner's rejections, including rejections of dependent claims.

In regard to Claims 1, 19, 22, 30, 34, and 38-39, the Examiner asserts that Smith teaches a system comprising sensors for monitoring a water installation 23; an electronic data acquisition device 13 for receiving data obtained by the sensor; a remote server 109 for communicating with the electronic data acquisition device; and a network interface 111 providing a connection between the server and the data acquisition device.

Among other things, Applicants respectfully submit that Smith does not teach or make obvious a local or web based/Internet remote control of a spa/pool as disclosed in Applicants' original Claim 39, amended Claims 30, 34, 39, and new Claim 40. On the contrary, Smith's disclosure is at most sufficient to "teach" only local control and monitoring of very specific aspects of a Home Automation System.

In this regard, Smith teaches a software system that allows for control of, and/or communication with, end devices and communication systems that utilize different command and communications protocols and languages. (col. 1, l. 16-20) Specifically, Smith allegedly teaches a controller 13 based system that maintains in memory a plurality of computer programs which can be utilized to control a variety of building systems, including for example, a water management system 23 that apparently encompasses a pool/spa. (col. 7, l. 61-66) However, as detailed herein, Applicants submit that at the time the Smith application was filed (September 30, 1997), technology did not exist to permit remote control of a pool or spa. As such, Smith could not have developed a communication system that would have allowed for remote control of a pool/spa utilizing different command and communications protocols and languages. This is not to say that the Smith invention may have been able to control other subsystems such as security or entertainment.

Regarding the original, amended, and new claims submitted herewith, Applicants respectfully submit that none of the art of which Applicants are aware discloses, teaches, or makes obvious those inventions, alone or in any permissible combination. Of those claims, 1, 19, 22, 30, 34, 39 and 40 are independent, so once those are allowable, all claims depending from them are allowable. The remarks below therefore are directed to the allowability of those Claims.

In this regard, Claims 1, 30, and 34 have been amended to more clearly define the web-based application of Applicant's invention. Likewise, new Claim 40 has been added the further elaborate on this concept. Neither Smith nor any of the other art (nor any permissible combination thereof) discloses or makes obvious (certainly not without undue experimentation) a

system that utilizes the Internet to remotely monitor and control a pool/spa to enable persons skilled in the art to practice Applicants' inventions.

In this regard, among other things, Claim 1 requires a "a network interface for providing a web-based network connection between the remote data collection and storage server and the electronic data acquisition device"; Claim 30 requires the steps of transmitting and accessing facilitated by the Internet; Claim 34 requires a selected spa parameter; means for communicating a selected spa parameter to a network server associated with the Internet; Claim 39 requires providing means to monitor parameters at a pool and transmitting the parameters to a server connected to the Internet; and Claim 40 requires "a network interface for providing a connection between said remote server and said data acquisition and control device via a web-based network".

As for original Claims 19 and 22, neither Smith nor any of the other art (nor any permissible combination thereof) discloses or makes obvious the benefits of using a remote server, an electronic data acquisition and control device (such as Applicants' preferred TINI device), or the other element combination as claimed by Applicants', to enable the use of embedded Internet technology for remote control and monitor of a pool/spa.

CLAIM REJECTIONS - 35 U.S.C. §103

PARAGRAPHS 26-31 OF OFFICE ACTION

Finally, the Examiner has rejected Claims 5-6, 10-11, 13-15, 17-18, 21, 29, and 33 under 35 U.S.C. §103(a) as allegedly being unpatentable over Smith as applied to Claims 1, 19, 22, 30 and 34.

As noted above, Applicants respectfully submit that the Examiner's rejection of Claims 1, 19, 22, 30 and 34 on the basis of the Smith reference is improper and/or has been overcome. Accordingly, Applicants further respectfully submit that there is likewise no basis for the Examiner's §103 rejection of dependent Claims 5-6, 10-11, 13-15, 17-18, 21, 29, and 33. In other words, because Smith does not warrant the Examiner's rejection of 1, 19, 22, 30 and 34 under §102, Smith does not warrant rejection of the dependent claims under §103.

Moreover, claims depending from allowable claims are themselves allowable. Accordingly, since Claims 1, 19, 22, 30 and 34 should be allowed as explained above, claims depending from those claims (Claims 5-6, 10-11, 13-15, 17-18, 21, 29, and 33) should likewise be allowed.

Applicants likewise submit that new Claims 40-47 submitted herewith are not disclosed nor made obvious by any reference or permissible combination of references of which Applicants are aware, and that those new claims should therefore be allowed.

In view of the amendments and remarks set forth above, it is thought that the application is now in condition for allowance, notice whereof is respectfully requested of the Examiner.

If the Examiner has any questions regarding the foregoing, or if the Examiner would like to discuss any remaining or new issues regarding this communication, the Examiner is invited to contact the undersigned representative of Applicants at (949) 718-6750.

Respectfully submitted,

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Enclosures

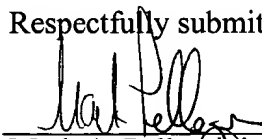
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If the Examiner has any questions regarding the foregoing, or if the Examiner would like to discuss any remaining or new issues regarding this communication, the Examiner is invited to contact the undersigned representative of Applicants at (949) 718-6750.

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